



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,372	11/03/2003	Joseph P. Deschamps	2596-0002	1123

7590

05/28/2004

Davidson Berquist
Klima & Jackson LLP
Suite 920
4501 North Fairfax Drive
Arlington, VA 22203

EXAMINER

LE, DAVID D

ART UNIT	PAPER NUMBER
----------	--------------

3681

DATE MAILED: 05/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/698,372

Applicant(s)

DESCHAMPS ET AL.

Examiner

David D. Le

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

This is the First Office action on the merits of Application No. 10/698,372, filed 03 November 2003. Claims 1-21 are pending.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the wheel-driving output as a gear that engages the gear arrangement recited in claims 4, 12, and 19 must be shown or the feature(s) canceled from the claim(s). Also the single pin as the connector element recited in claim 14 must be shown or the feature(s) canceled from the claim(s) (Fig. 1 shows multiple pins as the connector element). No new matter should be entered. The only wheel-driving outputs shown are drive cups 42 and 46. These drive cups are described as being "secured" to the connector pins supporting the pinion gears of the gear arrangement. It does not appear that a wheel-driving output as a gear that engages the gear arrangement is described anywhere in the specification. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible

Art Unit: 3681

harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-21 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 6,641,497 to Deschamps et al. Although the conflicting claims are not identical, they are not patentably distinct from each other because they recite the same structural elements.

Specification

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Antecedent basis must be provided in the specification for the limitation in claims 4, 12, and 19 that recites that the wheel-driving output is a gear that engages the gear arrangement. Antecedent basis in the specification must also be provided for the limitation in claim 14 that recites the connector element is a single pin.

Claim Objections

5. Claim 20 is objected to because of the following informalities:

- Claim 20, line 2, the word "associate" should be --associated--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. **Claims 4, 12, 14, and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

As mentioned above, the limitation in claims 4, 12, and 19 and the limitation in claim 14 are inconsistent with the specification and drawings. Therefore, the intended meaning of these limitations is not clear.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. **Claims 1-21, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,074,830 to Perry.**

Claims 1-21:

Perry (Figs. 1 and 4; column 1, line 66 – column 4, line 55) discloses a continuously variable transmission comprising:

- A drive shaft (4) having an axis of rotation;
- A drive gear (6) joined to the drive shaft for imparting rotation to the drive shaft about said axis;
- A gear arrangement (Fig. 1, elements 10, 11, 13) mounted on the drive shaft said gear arrangement being rotatable about both the axis of rotation of the drive shaft and about its own rotational axis;
- A driven gear (7) mounted on the drive shaft between said drive gear and the gear arrangement in operative relationship with the gear arrangement, said driven gear being rotatable about said axis of rotation of the drive shaft independently of rotation of the drive shaft, said drive and driven gears having surfaces facing one another provided with respective concavities therein;

Art Unit: 3681

- A pivotally adjustable disk (8) having an edge contacting the drive and driven gears within the concavities for controlling the speed and direction of rotation of the driven gear in accordance with the position of the disk;
- An additional gear (9) joined to the drive shaft for rotation therewith, said additional gear being positioned in operational relationship with the gear arrangement on an opposite side of the gear arrangement from the driven gear; and
- An wheel-driving output element (25) operatively engaged with the gear arrangement;
- Wherein said gear arrangement comprises at least two gears radially disposed relative to the axis of rotation of the drive shaft (column 2, lines 9-12);
- Wherein said at least two gears are pinion gears (column 2, line 9);
- Wherein said wheel-driving output element comprises a gear (Fig. 4, element 25a) which engages the said gear arrangement;
- A connector element (being the central shaft portion of element 10) associated with each of said at least two gears, said connector element being joined to the output element to translate rotation of the gear arrangement about the axis of rotation of the drive shaft to rotation of the wheel-driving output element;
- Wherein said at least two gears are pinion gears and wherein said connector elements are pins each having a shaft positioned along a respective axis of rotation of said at least two gears, the said at least two gears being rotatable about the respective pin shafts (see Fig. 1);

Art Unit: 3681

- Wherein said driven gear includes teeth (vicinity of element 13) arranged to cooperate with teeth provided in said gear arrangement (see Fig. 1);
- Wherein said teeth are located on an opposite side of the driven gear from the surface in which said annular concavity is provided (Fig. 1);
- Wherein when said disk is positioned in a plane parallel to the axis of rotation of the drive shaft, the gear arrangement rotates only about its rotational axis; and
- Wherein when said disk contacts the drive gear at a location closer to the axis of rotation of the drive shaft than where the disk contacts the driven shaft, the gear arrangement rotates about the axis of rotation of the drive shaft in a first direction as well as about its rotational axis, and wherein when said disk is in a position in which the disk contacts the drive gear at a location farther away from the axis of rotation of the drive shaft than where the disk contacts the driven shaft, the gear arrangement rotates about the axis of rotation of the drive shaft in an opposite direction as well as about its rotational axis.

10. Claims 1-16, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent No. 5921,882 to Hoge et al.

Claims 1-16:

Hoge (Fig. 1; column 2, line 27 – column 3, line 46) discloses an epicyclic transmission for controlling the speed and direction of rotation of a vehicle wheel, comprising: a drive shaft (52) having an axis of rotation; a drive gear (42) joined to the drive shaft for imparting rotation to the drive shaft about the axis; a gear arrangement (set

Art Unit: 3681

of planetary pinions 36) mounted on the drive shaft, the gear arrangement being rotatable about both the axis of rotation of the drive shaft and about its own rotational axis; a driven gear (46) mounted on the drive shaft (although such a mounting is not shown in the schematic shown in Fig. 1, one of ordinary skill in the art would recognize that in the actual transmission the driven gear would be so mounted) between the drive gear and the gear arrangement in operative relationship with the gear arrangement, the driven gear being rotatable about the axis of rotation of the drive shaft independently of rotation of the drive shaft, the drive and driven gears having surfaces (50) facing one another provided with respective concavities therein; a pivotally adjustable disk (52) having an edge contacting the drive and driven gears within the concavities for controlling the speed and direction of rotation of the driven gear in accordance with the position of the disk; an additional gear (30) joined to the drive shaft for rotation therewith, the additional gear being positioned in operational relationship with the gear arrangement on an opposite side of the gear arrangement from the driven gear (ring gear 32 is an extension of driven gear 46 and gear 30 is on an opposite side of gear arrangement 36 than gear 32); and a wheel-driving output element (planetary carrier 34) operatively engaged with the gear arrangement (the carrier drives the vehicle wheels through a number of mechanical components located between the carrier and the vehicle wheels including the transfer case 40).

Further regarding claim 2, one of ordinary skill in the art would recognize that the set of planetary pinions 36 includes at least two pinions.

Further regarding claims 5, 6, 13, and 14, one of ordinary skill in the art would recognize that the pinion gears 36 are mounted on pins extending from the planetary carrier 34.

Further regarding claims 7, 8, 15, and 16, as mentioned above, gear 32 is an extension of driven gear 46. Gear 32 includes teeth arranged to cooperate with teeth provided in the gear arrangement. The teeth are located on an opposite side of the driven gear from the surface in which the concavity is provided. In fact, the entire gear 32 is on the opposite side.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Greenwood (U. S. Patent No. 4,569,251) teaches a driveline for a track-laying vehicle with continuously variable steering and propulsion transmission as shown in Fig. 2.
- Greenwood (U. S. Patent No. 4,922,788) teaches a continuously variable transmission as shown in Fig. 2.
- Goi et al. (U. S. Patent No. 6,042,499) teaches a power transmission device for helicopter as shown in Figs. 5B-9.

- Andriani (U. S. Patent No. 6,656,074) teaches a transmission-steering assembly for a crawler as shown in Fig. 1.
- Japanese Patent No. JP406042607A teaches a transmission steering device for tracked vehicle as shown in Fig. 2.

12. This is a continuation of applicant's earlier Application No. 10/013,640 filed on 07 December 2001. All claims are drawn to the same invention claimed in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 3681

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 703-305-3690. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A Marmor can be reached on 703-308-0830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ddl

Charles A Marmor 5/20/04
CHARLES A. MARMOR
SUPERVISORY PATENT EXAMINER
ART UNIT 3681